

IN THE CLAIMS

This claim listing replaces all the previous listings.

1. (Currently amended) A bioactive polypeptide, MF3, with a primary structure depicted in SEQ ID NO: 1, or an active fragment of MF3 according to SEQ ID NO: 3 or SEQ ID NO:4, or any functional derivative of MF3, said polypeptide, or active fragment or functional derivative being capable of effecting a resistance of a plant against microbial diseases and/or against attack of plant parasites.

2. (Currently amended) An isolated DNA sequence according to SEQ ID NO: 2, ~~or fragment thereof~~, encoding a the bioactive polypeptide MF3 having amino acid sequence according to SEQ ID NO:1. ~~its active fragment or functional derivative according to claim 1, wherein said DNA fragment may contain degenerate codons.~~

3. (Currently amended) A method of acquiring resistance of a plant against microbes and/or plant parasites by introducing ~~the~~ bioactive polypeptide MF3 having an amino acid sequence SEQ ID NO:1 of claim 21, or an active fragment having an amino acid sequence SEQ ID NO:3 or SEQ ID NO:4, ~~or a functional derivative thereof~~ into plants mechanically or by means of carrier molecules.

4. (Original) The method according to claim 3, wherein the carrier is chitosan.

5. (Original) A vector comprising the DNA according to claim 2.

6. (Previously amended) A transgenic plant or plant cell culture comprising a vector according to claim 5.

7. (Currently amended) A host cell stably transformed ~~or transfected~~ with a vector of claim 5.

8. (Currently amended) A plant protectant composition comprising isolated bioactive polypeptide MF3 having an amino acid sequence according to SEQ ID NO:1, an isolated active fragment of MF3 having an amino acid sequence according to SEQ ID NO:3 or SEQ ID NO:4 ~~or any isolated functional derivative of MF3 of claim 1~~.

9. (Cancelled)

10. (Previously amended) A method of isolating and purifying the bioactive polypeptide of claim 1 from bacterial cells expressing said bioactive polypeptide, the method comprising the steps:

- a) cultivating a microbial producer strain and extracting cells with a buffer solution at an elevated temperature;
- b) precipitating a crude MF3 polypeptide at low temperature with a precipitant;
- c) fractionating re-dissolved precipitate by an anion exchange chromatography column and collecting fractions with anti-microbial or anti-insect activities;
- d) performing polyacrylamide gel electrophoresis of the polypeptide fractions with anti-microbial, anti-nematode, or anti-insect activities;
- e) recovering the protein eluted from the gel of step d.

11. (Previously amended) A method to protect plants or plant cell cultures from microbial diseases or pests by applying the protectant composition of claim 8.

12. (Previously amended) The method according to claim 11, wherein the plants or plant cell cultures are protected from diseases caused by a microbe selected from the group consisting of *Phytophthora infestans*, *Erwinia carotovora*, *Pyricularia oryzae*, *Fusarium culmorum*, *Septoria nodorum*, Tobacco Mosaic Virus, Potato Virus X, and Potato Virus Y.

13. (Previously amended) The method according to claim 11, wherein the plants are protected from potato cyst nematodes.

14. (Previously amended) The transgenic plant or plant cell culture of claim 6, wherein the transgenic plant or cell culture expresses increased resistance against a disease caused by a microbe selected from the group consisting of *Phytophthora infestans*, *Erwinia carotovora*, *Pyricularia oryzae*, *Fusarium cumorum*, *Septoria nodorum*, Tobacco Mosaic Virus, Potato Virus X, and Potato Virus Y.

15. (Previously amended) The transgenic plant or plant cell culture of claim 6, wherein the transgenic plant or cell culture expresses increased resistance against potato cyst nematodes s listing of claims substitute any and all previously listed claims.

16. (New) An isolated DNA sequence encoding an active fragment of bioactive polypeptide MF3, said active fragment having an amino acid sequence according to SEQ ID NO:3 or SEQ ID NO:4.